

module, a USB/USB+ hub, and an external functions unit; and
a serial bus coupling the PC to the bus monitor and control module.

36. (Amended) The [apparatus] system of claim 32, wherein the hub provides at least one USB port and at least one USB+ port.

37. (Amended) The [apparatus] system of claim 32, wherein the external functions unit provides at least one serial port.

38. (Amended) The [apparatus] system of claim 37, wherein the external function unit provides at least one parallel port.

39. (Amended) The [apparatus] system of claim 37, wherein the external function unit provides at least one modem port.

40. (Amended) The [apparatus] system of claim 37, wherein the external function unit provides at least one application specific port.

41. (Amended) The [apparatus] system of claim 37, wherein the external function unit provides at least one network port.

42. (Amended) The [apparatus] system of claim 37, wherein the external function unit provides at least one Internet port.

43. (Amended) A method for expanding an interface to a computer, comprising:
providing a serial communication link to the computer;
providing a device for coupling to the serial communication link, including:
providing a backplane with at least one expansion slot and with an upstream connector for coupling to the serial communication link; and

PRELIMINARY AMENDMENT

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Title: BUS CONTROL MODULE FOR IMPROVING LEGACY SUPPORT



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Page 5
Dkt: 977.039US2

CLEAN VERSION OF PENDING CLAIMS

1. (Amended) A device, comprising:
a backplane with at least one expansion slot and with an upstream connector for connecting with a computer via a serial bus, wherein the device is external to the computer; and
at least one expansion card for coupling with the expansion slot, the expansion card including at least one port to provide an interface with the computer.
2. The device of claim 1, wherein the at least one expansion card includes at least one USB+ port.
3. The device of claim 2, wherein the at least one expansion card includes at least one USB port.
4. The device of claim 1, wherein the at least one expansion card includes at least one serial port.
5. The device of claim 1, wherein the at least one expansion card includes at least one parallel port.
6. The device of claim 1, wherein the at least one expansion card includes at least one application specific port.
7. The device of claim 1, wherein at least one the expansion card includes:
at least one USB+ port;
at least one RS232 serial port; and
at least one IEEE 1284 parallel port.
8. The device of claim 1, wherein the at least one expansion card further includes at least

one modem connector.

9. The device of claim 1, wherein the at least one expansion card further includes at least one network connector.

10. The device of claim 1, wherein the at least one expansion card further includes at least one Interact connector.

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11. The device of claim 1, wherein the backplane includes a master slot coupled to at least one slave slot via a communication link.

12. The device of claim 1, further including a port for providing UPS status and control communication.

13. An apparatus, comprising:
a control module;
a hub for providing USB/USB+ outputs, the hub being coupled to the control module;
and
an external functions unit for providing outputs, the external functions unit being coupled to the hub.

14. (Amended) The apparatus of claim 13, wherein the control module includes a port for providing a serial communication link to a computer.

15. (Amended) The apparatus of claim 14, wherein the communication link includes a USB link and further includes power.

16. The apparatus of claim 13, wherein the control module includes at least one port for providing UPS status and control communication.

17. The apparatus of claim 13, wherein the external functions unit provides at least one serial port.

18. The apparatus of claim 17, wherein the external function unit provides at least one parallel port.

19. The apparatus of claim 13, wherein the external functions unit provides at least one application specific control.

20. The apparatus of claim 13, wherein the external function unit provides at least one modem port.

21. The apparatus of claim 13, wherein the external function unit provides at least one network port.

22. The apparatus of claim 13, wherein the external function unit provides at least one Internet port.

23. The apparatus of claim 13, further including an uninterruptible power supply (UPS) coupled to and controlled and monitored by the control module.

24. The apparatus of claim 23, wherein the UPS includes:
an alternating current (AC) to direct current (DC) converter to receive an AC power signal from an external source;
a battery coupled to the AC/DC converter; and
a DC/DC converter to convert a DC signal of the AC/DC converter into at least a first predetermined DC voltage for use by a device external to the apparatus.

25. The apparatus of claim 24, wherein the UPS further includes:

a charger circuit coupled between the AC/DC converter and the battery to charge the battery from an incoming power signal; and

a power conditioning circuit coupled to the AC/DC converter to pass the incoming power signal through to an output node.

26. The apparatus of claim 25, wherein the UPS further includes:

A1 a DC/AC inverter coupled to the battery; and

a switch coupled between the DC/AC inverter and the power conditioning circuit to select which of the battery and the power conditioning circuit can supply power to the output node.

27. The apparatus of claim 23, wherein the bus control module is coupled to monitor subunits of the UPS and controls the switch.

28. The apparatus of claim 23, further including a plurality of switches independently controlled by the bus control module to select which of a plurality of output lines are supplied power by the UPS.

29. The apparatus of claim 23, further including a housing containing the UPS, bus control module and the bus hub.

30. The apparatus of claim 29, wherein the housing further includes a plurality of expansion slots.

31. The apparatus of claim 29, wherein the housing includes connection points for coupling an expansion module to the housing.

32. A system comprising:

a legacy free personal computer (PC);

a housing containing an uninterruptible power supply (UPS), a bus monitor and control

module, a USB/USB+ hub, and an external functions unit; and
a serial bus coupling the PC to the bus monitor and control module.

33. The system of claim 32, wherein the bus is a Universal Serial Bus (USB).

34. The system of claim 32, wherein the bus monitor and control module distributes direct current (DC) power to the PC over the bus.

35. The system of claim 32, wherein the control module includes at least one port for providing UPS status and control communication.

36. (Amended) The system of claim 32, wherein the hub provides at least one USB port and at least one USB+ port.

37. (Amended) The system of claim 32, wherein the external functions unit provides at least one serial port.

38. (Amended) The system of claim 37, wherein the external function unit provides at least one parallel port.

39. (Amended) The system of claim 37, wherein the external function unit provides at least one modem port.

40. (Amended) The system of claim 37, wherein the external function unit provides at least one application specific port.

41. (Amended) The system of claim 37, wherein the external function unit provides at least one network port.

42. (Amended) The system of claim 37, wherein the external function unit provides at least one Internet port.
43. (Amended) A method for expanding an interface to a computer, comprising:
providing a serial communication link to the computer;
providing a device for coupling to the serial communication link, including:
providing a backplane with at least one expansion slot and with an upstream connector for coupling to the serial communication link; and
providing at least one expansion card for coupling with the expansion slot, including providing at least one port as an interface for the computer.
44. The method of claim 43, wherein providing at least one expansion card includes providing at least one USB port.
45. The method of claim 43, wherein providing at least one expansion card includes providing at least one USB+ port.
46. The method of claim 43, wherein providing at least one expansion card includes providing at least one serial port.
47. The method of claim 43, wherein providing at least one expansion card includes providing at least one parallel port.
48. The method of claim 43, wherein providing at least one expansion card includes providing at least one application specific port.
49. The method of claim 43, wherein providing at least one expansion card includes providing at least one Interact connection.

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Page 11

Dkt: 977.039US2

50. The method of claim 43, wherein providing at least one expansion card includes providing at least one modem connection.

51. The method of claim 43, wherein providing at least one expansion card includes providing at least one network connection.

52. (New) A device for expanding a computer interface, comprising:
an upstream connector for connecting to a computer through a Universal Serial Bus (USB) using a USB protocol, wherein the device is external to the computer;
a PCI bus structure having a PCI protocol;
a bus control module connected to the upstream connector and to the PCI bus structure, wherein the bus control module is adapted to provide a protocol conversion between the USB protocol and the PCI bus protocol; and
a master slot and at least one slave slot connected to the PCI bus structure.

53. (New) A method for expanding a computer interface, comprising:
providing PCI bus structure in a device external to a computer, wherein the PCI bus structure has a PCI bus protocol;
providing a master expansion slot and at least one slave expansion slot connected to the PCI bus structure;
using a USB protocol to communicate between the device and the computer; and
converting the USB protocol to the PCI bus protocol.